

CLAIMS

- Sub A
1. A multi-layer film comprising at least three layers, an outer layer (A), an inner layer (I) and, disposed in between, a middle layer (M), each of which consists of up to 60 to 100 % by weight of polypropylene materials and up to 40 to 0% by weight of a thermoplastic elastomer, respectively referring to the total weight of the respective layer, wherein following hot sterilization at 121°C or higher temperatures using a hot water steam spraying process, the multi-layer film displays no measurable.
 2. The multi-layer film according to claim 1, wherein the proportion of the total thickness of the film represented by the thickness of the middle layer (M) is in the range between 40 to 80%.
 3. The multi-layer film according to claim 1, wherein the proportion of the total thickness of the film represented by the thickness of the middle layer (M) is in the range between 45 to 75%.
 4. The multi-layer film according to claim 1, wherein the proportion of the total thickness of the film represented by the thickness of the middle layer (M) is in the range between 60 to 80%.
 5. The multi-layer film according to claim 1, wherein the proportion of the total thickness of the film represented by the thickness of the outer layer (A) is in the range between 30 to 7.5%.
 6. The multi-layer film according to claim 1, wherein the proportion of total thickness of the film which is represented by the thickness of the inner layer (I) is in the range between 30 to 12.5%.
 7. The multi-layer film according to claim 1, wherein the total thickness of the film is in the range between 120 and 300 μm .
 8. The multi-layer film according to claim 1, wherein the total thickness of the film is in the range between 150 and 250 μm .
- Sub B

9. The multi-layer film according to claim 1, wherein the total thickness of the film is in the range between 170 and 230 μm .

10. The multi-layer film according to claim 1, wherein the elasticity modulus of the material of the middle layer (M) is less than or equal to 250 MPa.

11. The multi-layer film according to claim 1, wherein the elasticity modulus of the material of the middle layer (M) is less than or equal to 150 MPa.

12. The multi-layer film according to claim 1, wherein the elasticity modulus of the material of the middle layer (M) is less than or equal 135 MPa.

13. The multi-layer film according to claim 1, wherein the elasticity modulus of the material of the middle layer (M) is less than or equal to 100 MPa.

14. ~~The multi-layer film according to claim 1, wherein the material of the middle layer (M) has a measureable yield of less than or equal to 8 MPa.~~

15. The multi-layer film according to claim 1, wherein the elasticity modulus of material of the outer layer (A) is greater than 250 MPa.

16. The multi-layer film according to claim 1, wherein the elasticity modulus of material of the outer layer (A) is greater than 300 MPa.

17. The multi-layer film according to claim 1, wherein the elasticity modulus of material of the outer layer (A) is greater than 400 MPa.

18. The multi-layer film according to claim 1, wherein the melting point of the layer (A) is greater than the melting point of the layer (I), respectively, for each layer.

19. The multi-layer film according to claim 1, wherein the melting point of the layer (M) is less than the melting point of the layer (A) and greater than the melting point of the layer (I), respectively for each layer.

20. The multi-layer film according to claim 1, wherein the layers (A), (M) and (I) have Vicat temperatures which, with respect to layer (M) is in the range from 35 to 75°C, and with respect to layers (A) and (I) are in the range of less than or equal to 121°C.

21. The multi-layer film according to claim 1, wherein the layers (A), (M) and (I) have Vicat temperatures which, with respect to layer (M) is in the range from 35 to 70°C, and with respect to layers (A) and (I) are in the range of less than or equal to 121°C.

22. The multi-layer film according to claim 1, wherein the layers (A), (M) and (I) have Vicat temperatures which, with respect to layer (M) is in the range from 40 to 65°C, and with respect to layers (A) and (I) are in the range of less than or equal to 121°C.

23. The multi-layer film according to claim 1, wherein the layers (A), (M) comprise up to 100 % by weight and the layer (I) by up to 60 to 100 % by weight, of one or more polymers selected from the group consisting of homopolymers of polypropylene (homo-PP's), random copolymers of polypropylene (random co-PP's), block copolymers of polypropylene, flexible copolymers of polypropylene (co-FPO's), flexible copolymers of polypropylene (co-FPO's), and the layer (A) comprises additionally up to 40 to 0% by weight styrene-ethylene/butylene-styrene block copolymers (SEBS).

24. The multi-layer film according to claim 23, wherein the layer (I) comprises up to 70 to 90% by weight of one or more polymers from the group consisting of homopolymers of polypropylene (homo-PP's), random copolymers of polypropylene (random co-PP's), block copolymers of polypropylene, flexible copolymers of polypropylene (co-FPO's), flexible copolymers of polypropylene (co-FPO's).

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25. The multi-layer film according to claim 23, ~~wherein the layer (A) comprises additionally~~
up to 30 to 10% by weight of styrene-ethylene/butylene-styrene block copolymers (SEBS).

26. The multi-layer film according to claim 1, comprising five layers having the sequence
(A₁-M₁-A₂-M₂-I) or (A₁-M₁-M₂-A₂-I), the thickness of (M) and (A) being the sum of (M_i) and
(A_i) respectively.

Sub B1
27. The multi-layer film according to claim 1, comprising seven layers in the sequence (A₁-
M₁-A₂-M₂-A₃-M₃-I), the thickness of (M) and (A) being the sum of (M_i) and (A_i) respectively.

28. A method of producing a multi-layer film according to claim 1, comprising co-extruding
the layers.

29. The method according to claim 28, wherein the film is co-extruded as a flat or tubular
film.

30. A method of producing a multi-layer film according to claim 1, comprising ~~lining the~~
layers with one another.

Sub A4
31. The method according to claim 30, wherein the film is lined as a flat film.

32. A packaging comprising a multi-layer film according to claim 1.

Sub B1
33. The packaging according to claim 32, wherein the packaging accommodates or stores
water-based parenteral fluids.

34. The packaging according to claim 32, wherein the packaging accommodates or stores
fluid lipophilic emulsions.